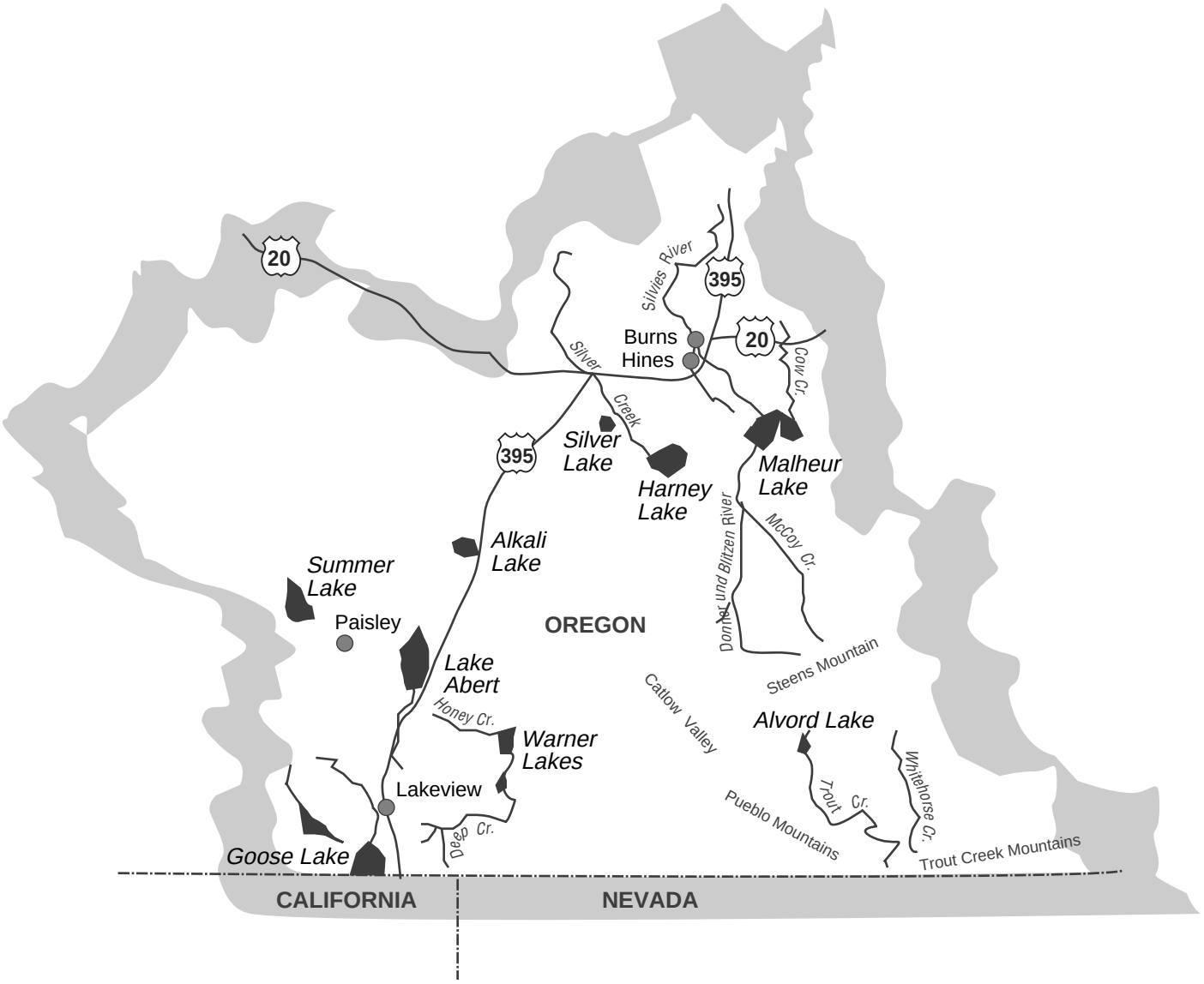
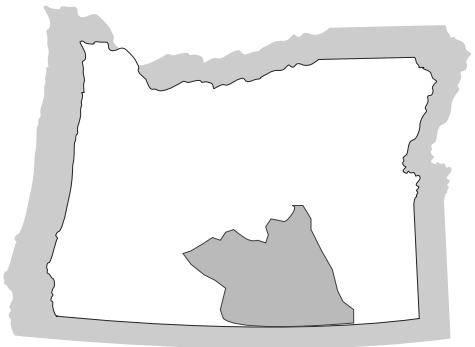
Oregon Interior Basin





0 5 10 15
Scale in Miles

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Oregon Interior Basin

The Oregon Interior Basin is the northern extension of the Great Basin, usually associated with Nevada. The basin's few rivers drain to large, shallow lakes (playas) rather than to the ocean. The Great Basin, known to geologists as the Basin and Range Province, consists of many north-south oriented mountain ranges with flat stretches between. The playas — Harney, Malheur, Warner, Summer, Abert and Goose lakes — occupy the largest flats. The lowest areas in the basin are about 4,000 feet above sea level, while the highest ranges, notably Steens and Hart mountains, rise more than 4,000 feet higher. Sagebrush and widely scattered juniper cover vast areas. Only where farms have been established or in the more elevated parts of the basin is the plant cover significantly different. The forested areas contain mostly ponderosa pine.

The Interior Basin, the least populated and least developed part of Oregon, is very short of water. Small reservoirs along the basin's perimeter have been developed for irrigation water supply, but most of the land in the basin is open dryland range. Two large wildlife refuges — Malheur and Hart Mountains — are managed by the U.S. Fish and Wildlife Service. Burns, Lakeview and Hines (1990 populations 2,920, 2,625 and 1,530, respectively) are by far the largest incorporated communities in the basin.

The Interior Basin's principal streams are the Silvies River, the Donner und Blitzen River, Silver Creek, the Chewaucan River, Deep and Honey creeks, and Drews and Thomas creeks. The first three of those streams drain to the Harney-Malheur Lake playa, the Chewaucan River to Lake Abert, Deep and Honey creeks to the Warner Lakes, and Drews and Thomas creeks to Goose Lake. All those streams are smaller than most other streams in the Pacific Northwest draining areas of similar size. However, large floodflows sometimes occur during the spring snowmelts or, rarely, during winter rainstorms invading from western Oregon and

the Pacific Ocean. On the whole, rainfall is limited. Widespread areas in the basin receive an average of less than 15 inches of precipitation annually.

Emergency repairs to two small flood control works have been made by the Corps of Engineers and essential public works have been protected at another location. None of the basin's streams are navigable and no multipurpose developments have been constructed. Most of the Interior Basin is in the Corps' Portland District. A small part of the basin draining to Goose Lake is in Sacramento District.

Flood Control Development

Emergency Flood Control Activities

Repairs of flood-protection works have been made at two locations in Lake County, under the provisions of Section 5 of the 1941 Flood Control Act, as amended. That emergency work was accomplished at the Adel location on Deep Creek and at the Lynch location on Honey Creek in Warner Valley. Costs were $20,300 and $19,300 respectively.

Continuing Authorities for Flood Control

Malheur Lake Flood Reduction Study

Malheur Lake is the terminus of a closed drainage basin with no outlet. Malheur Lake, in the closed Harney drainage in southeastern Oregon, had experienced extensive surface elevation increases due to high inflows beginning in 1982. Successive years of high run-off raised the water level of the lake to flood levels. Approximately 100,000 acres had been flooded above the typical historic lake surface area of 40,000 to 60,000 acres. The high lake elevation caused severe economic damage in the region and in Harney County. Damage from flooding continued to occur to private land and ranches, roads, highways, utilities, and a railroad branch line.

A feasibility report regarding alternative solutions to the flooding was completed in 1987. The study included evaluations of three alternatives. The alternative of constructing an outlet channel from the lake through Virginia Valley to control the lake level was strongly opposed by Malheur County and did not have the support of the Governor. The alternative to purchase flood-prone lands for incorporation into the Malheur National Wildlife Refuge, along with relocating or raising the flooded branch line of the Union Pacific railroad, was opposed by Harney

County. The alternative of raising or relocating the flooded portion of the branch line was not pursued because of Corps policy against federal participation in projects benefiting a single owner. The conclusion was that no plan that the Corps could participate in was acceptable to the local community.

Subsequent to completion of the feasibility report, the Oregon Congressional delegation pursued a plan to raise the flooded portion of the railroad. An exception to the policy of no federal participation in projects benefiting a single owner was granted in May 1988. The exception was granted because of substantial benefits that would accrue to the U.S. Forest Service though increased timber sales receipts. The project was implemented under the Continuing Authorities program. The Malheur Lake project near Burns, Oregon was completed in fiscal year 1991. The project raised the grade of a railroad line above the flood level of the lake.

Protection of Essential Public Works

Construction of a revetment along the Chewaucan River to protect the Paisley sewage lagoon was completed in December 1972, under provisions of Section 14 of the 1946 Flood Control Act. The total cost of the project was $42,800.